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Chapter 10
Examination of the Effect of New Media in Revolutionizing Entrepreneurship in Bauchi State, Nigeria

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ABSTRACT

Nano, micro, small, and medium enterprises (NMSMEs) are still heavily reliant on the "brick-and-mortar" system or traditional street-side business methodology, which is no longer as efficient as it once was. In contrast to the foregoing, this study examined the effect of new media on nano and micro enterprises (MSSBs) in Nigeria. Hinged on the technology acceptance model (TAM) and theory of digital divide, the research employed a survey method to generate responses from micro business owners within 36 business categories in Bauchi Metropolis by deploying 100 questionnaires to a random sample size. Chi-Square test calculator and sample median test were used to examine the various hypotheses at a 5% level of significance. The analysis revealed that there was no significant positive relationship between new media products' usage and increased business performance in Bauchi. This is because the majority of NME owners were still unaware of what new media products could offer them. As such, NME owners need to be trained to adopt the new media tools in order to boost NMEs in this region.

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INTRODUCTION

The need for survival, expansion, customer satisfaction, generation of extraordinary value for customers and other stakeholders, the establishment of new product lines and service offerings, profitability, lower operating costs, and development into a great enterprise are all common business goals for Micro, Small and Medium Scale Enterprises (MSMEs). Although, whether big or small, enterprises continue to depend on government to create an enabling environment where risks are minimised and well managed. In addition, the proper management of customs, laws, regulations, policies, trade agreements and public infrastructure will facilitate ease of movement of a product or service along its value chain (Onyinyechukwu, 2020). With these expectations, the advancements in Information Communication and Technology (ICT), the use of new media tools such as the internet, social media, and digital devices such as mobile smart phones have changed the way and manner in which businesses are now conducted.

According to Appel, Grewal, Hadi et al. (2020), in recent years, the use of new media platforms such as social media by company owners has become an essential platform for promoting their products and services to customers. The media as a tool has long been a visually appealing marketing tactic utilised by huge corporations to engage with prospective consumers. Consequently, the combinations of the Internet and other digital media have caused disruptive innovation in the business space. This development, which is currently ongoing, has resulted in continuity in transactions happening within the online world as it is not limited by the time of the day where traditional businesses would operate between a time-frame daily. When compared to three to four decades ago, there has been a significant shift in how business is conducted nowadays thanks to globalisation. As Quade & Leimstoll (2015) point out, cell phones have ubiquitous uses in many regions of the world as they are utilised for both personal and professional purposes.

It should be noted that, while social media was designed primarily as a means of socialising, some business owners have recognised the commercial prospects that they provide and have opted to use them to promote their enterprises. According to Gielens & Steenkamp (2019) the rise of E-commerce retailers, has taken advantage of new media tools such as social networking sites (Facebook and Instagram), Microblogs (Twitter) and E-commerce sites (Konga and Jumia) as a marketing opportunity. This has helped to cut out the conventional intermediary cost of advertising which middlemen usually profited from as they had previously made connecting businesses directly to customers difficult. In 2019, Chivandi, Samuel, & Muchie posited that the use of these new media products has significantly changed how consumers and marketers communicate and even engage in business transactions.

The challenges surrounding the "brick-and-mortar" system or traditional street-side business that offers products and services to its customers face-to-face either in an office or store that the business owns, or rents include the high cost of maintenance, long travel and delivery times which requires their physical presence to buy and sell. This has made them unable to deliver their products and services except they are present. Also, this long process of activity ends as within the locality of the business owner as opposed to the new media environment that allows businesses to continue globally.

Online media has also enabled customers to survey, select, and purchase products and services from businesses around the world. Peer communication through social media sites like Facebook and Instagram has become a new form of consumer socialisation which has a profound influence on consumer decision making and, consequently, on marketing strategies. The consumer socialisation theory predicts that communication among consumers affects their cognitive, affective, and behavioural attitudes (Al Kailani and Kumar, 2011). New media tools, therefore, might be considered as an important agent of

consumer socialisation. In Nigeria, both large and small enterprise owners have also joined millions of internet users, to reach out to customers and new shoppers by promoting and offering their products and services to them online.

The mortality rate among MEs in Nigeria is very high within their first five years of existence. The reasons for the high mortality rate include the following among others: Many prospective entrepreneurs do not have a clear vision and mission of what they intend to do. Many of the SMEs are not business specific and hence have no focus and are easily blown away by the wind. With the dismantling of trade barriers as part of globalisation, SMEs in developing countries such as Nigeria are facing intense competition from industries of other countries, which have enabling environment for production, distribution, and marketing. For instance, the environment in which SMEs in Europe, South East Asia and America operate provides stable power and water supply, standard road and rail network, efficient water and air transport system, advanced technology, modern communication facilities, efficient and responsive financial system and above all good governance. This is not the case in Nigeria where hostile occurrences and policies stifle the survival of SMEs in the global competitive drive.

According to the National policy, an enterprise may be classified by size, sector, organisation, technology, and location. In practice, the number of employees is the most common standard used in National SMEs policies worldwide; in this manner, the classification for small scale businesses or enterprises as adopted by the National Policy on MSMEs earlier, before 2020, had mainly 3 categories as shown in Figure 1.

Figure 1. Data from MSME 2017 survey report

SECTOR	MICRO	SMALL	MEDIUM
Employment Band	1-9	10-49	50-199

From the table above, a micro enterprise is one that is capable of employing a maximum of 9 and minimum of 1 staff – with less than 10,000,000 Naira excluding land and buildings. Small Enterprises are those enterprises whose total assets (excluding land and building) are above 10,000,000 Naira but not exceeding 100, 000,000 Naira with a total workforce of above 10, but not exceeding 49 employees. Medium Enterprises are those enterprises with total assets (excluding land and building) which are above 50,000,000 Naira, but not exceeding 1,000,000,000 Naira with a total workforce of between 50 and 199 employees.

However, the latest report by SMEDAN (2021) revealed a new policy (to run from 2021 – 2025) with a new category *Nano* Enterprise. Hence shown in Figure 2.

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Figure 2. Data from MSME 2021 survey report

S/N	CATEGORY	EMPLOYMENT SIZE	TURNOVER (Naira))
1.	Nano/Homestead Enterprises	1-2 persons	Less than 3 million
2.	Micro Enterprises	3-9 Persons	3 < 25 Million
3.	Small Enterprises	10-49 persons	25 < 100 Million
4.	Medium Enterprises	50-199 persons	100 Million < 1 Billion

The table above shows that the MEs have been further divided to accommodate for nano or homestead businesses which were earlier not factored in. A micro enterprise is one that is capable of employing a maximum of 9 and minimum of 3 staff – with less than 25,000,000 Naira excluding lands and buildings. The Nano Enterprise is one that is capable of employing a maximum of 2 staff – with less than 3,000,000 Naira excluding lands and buildings.

For the purpose of this study, Nano, and Micro Enterprises (NMEs) will be the scope. This is because, new media products are a new phenomenon that has changed how their business environment operates even in Nigeria. Medium Enterprises are able to gain access to digital resources that were otherwise not available to them in the past (Eze, Chinedu-Eze, Okike & Bello, 2020), however, it is an alarming issue that some NMEs are not conversant with social media networking apps, mobile and online banking, and E-commerce opportunities as they simply reject any form of payment or contacts which is not physical or cash. New media tools have also helped businesses to increase their worthiness, cultivate strategic partnerships and increase their contact with customers and suppliers.

While the wide acceptance and popular usage of new media products has made it possible for anyone who is interested to set up businesses of different types at any time, NMEs are below the bottom in the competing world regarding earning of profits compared with other business categories mainly because they do not employ modern techniques like digital marketing in their business activities through available new media products. They do not leverage on marketing and advertising campaigns which can be done almost for free online because the NMEs have yet to understand how new media products work as a global communication tool that can significantly improve their business performance. This could be tied to the digital divide which according to Dijk (2012) is the result of inequalities in four successive types: access motivation, physical access, digital skills, and different usage by the business owner. This is further justified by Gorbacheva, Niehaves, Plattfaut, & Becker (2011) who discovered that one of the strongest factors influencing the intention to adopt a technology such as internet banking services is the degree to which an individual believes that it is safe to use such services.

It is against this backdrop, that this study seeks to assess the effect of new media products on the business performance of NMEs across Bauchi State.

OBJECTIVES OF THE STUDY

The general objective or main objective of this study is to investigate the effect of new media tools on the NMEs in Nigeria.

The specific objectives are to:

1. Ascertain the effect of new media products on sales volume of NMEs in Bauchi State
2. Determine the relationship between new media products and business visibility of NMEs in Bauchi State.
3. X-ray the relationship between new media products and profitability of NMEs in Bauchi State.
4. Find out whether new media products are used by NMEs in Bauchi for their business.
5. Examine the knowledge of NMEs in Bauchi in the use of new media products.
6. Identify the challenges faced by NMEs in Bauchi in the use and adoption of new media products.

RESEARCH HYPOTHESES

The following hypotheses have been drawn to match the objectives of this study:

H_0. The use of new media products by NMEs in Bauchi State does not have a significant relationship on their sales volume.

H_1: The use of new media products by NMEs in Bauchi State has a significant relationship on their sales volume.

H_0: There is no significant relationship between new media products and business visibility of NMEs in Bauchi State.

H_1: There is a significant relationship between new media products and business visibility of NMEs in Bauchi State.

H_0: There is no significant relationship between new media products and profitability NMEs in Bauchi State.

H_1: There is a significant relationship between new media products and profitability of NMEs in Bauchi State.

H_0: NMEs in Bauchi do not use new media products for their businesses.

H_1: NMEs in Bauchi use new media products for their businesses.

H_0: NME owners in Bauchi do not know how to use new media products for their businesses.

H_1: NME owners in Bauchi know how to use new media products for their businesses.

THEORETICAL FRAMEWORK

Technology Acceptance Model (TAM)

TAM essentially describes how users of technology come to accept and use the technology. Davis (1989) developed TAM which specifies the causal relationships between system design features, perceived usefulness, perceived ease of use, attitude toward using and actual usage behaviour. When users are

presented with a new technology, the decision about how and when to use it is influenced by several factors. These include perceived usefulness; the degree to which a person believes that using a particular system would enhance their job performance, and perceived ease of use; the degree to which a person believes that using a particular system would be free from effort. TAM has been used in a number of researches in new media use (Sheng & Zolfagharian, 2014; Pavlou, 2003; Pentina et al., 2012; Lee et al., 2006; Koufaris, 2002; Gekombe, Tumsifu & Jani, 2019).

Theory of Digital Divide

According to the theory of digital divide, there is an economic and social divide between the inhabitants of a country and their access to information and communication technologies. There are several explanations behind the digital divide. One of the main factors is the rising wealth disparity. As one's money rises, so does one's access to and the use of technology such as the internet. Access to technology and knowledge is hampered by poverty and economic restrictions. Individuals, households, and even geographical units have unequal access to, and use of digital technologies; particularly those intended for information and communications according to Pick & Sarkar (2016). In addition, according to Hartnett (2022), previously documented inequities in access were initially associated to computers, but have since expanded to include the Internet, information, and other digital technologies in current times. Mayhew (2015) also points out that the digital divide is more than just a technology barrier; it also encompasses unequal access to, capacity building in terms of access to resources, and even training in terms of usage and utility.

These theories are relevant to the study as they support the possible effects that new media have on NMEs. Furthermore, they explain why NME owners' select or do not select online media for their businesses.

REVIEW OF RELATED LITERATURE

New Media Tools and Products

According to Cote (2022), new media is any digitally distributed media, from newspaper articles and blogs to music and podcasts. It can also refer to any internet-related form of communication, from a website or email to mobile phones and streaming apps.

New media products such as social media sites, have risen in popularity in recent years, attracting a lot of attention from researchers and practitioners (Appel, Grewal, Hadi, et al., 2020). Edosomwan, Prakasan, Kouame, Watson, and Seymour (2011) define social media as a venue where users can engage with one another, share content, and express their personal opinions. Social media platforms are part of the new media tools which comes in various forms, as shown in the table 1.

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Table 1. New media tools

New Media Tools	New Media Products
Social Networking Sites (SNS)	Facebook, Instagram,
Blogs	Blogger, WordPress
Microblogs	Twitter
Collaborative projects	Wikipedia
Content communities and Vlogs	YouTube, Vimeo, Vevo
Virtual game worlds	World of Warcraft
Virtual social worlds	Second Life
Calls	Mobile smart phones
E-commerce Sites	Jumia, Konga, Jiji and Amazon

The table above shows a variety of new media tools against the products. Olsen & Christensen (2015) posit that online technologies have revolutionised the way individuals communicate with one another and even do business. What is evident is that all of these new media tools need Internet connectivity to be accessed and to function through a digital device. With the availability of the range of sites with various features and user groups, consumers have many alternatives when it comes to their purpose to utilise online tools via the internet. The new media arena has evolved into a popular venue for communication, networking, and information exchange. For the purpose of this study, the categories that will be used are –11 Social networking sites specifically: WhatsApp, Twitter, Facebook, Tiktok, YouTube, Pinterest, LinkedIn, Instagram, Likee, Snapchat and Telegram. and E-commerce Sites.

Social Networking Sites, Business Visibility and Sales

While the terms social media and social networking sites or services seem to be used interchangeably, they are different. Social media is a collective term for websites and applications that focus on communication, community-based input, interaction, content-sharing, and collaboration (Lutkevich & Wigmore, 2021). While Social networking sites (SNSs) are virtual communities where users can create individual public profiles, interact with real-life friends, and meet other people based on shared interests using social media (Boyd & Ellison, 2007; Watermeyer, 2012; Griffiths, Kuss & Demetrovics, 2014). Any web site that allows social interaction is considered a social media site, including social networking sites such as Facebook, MySpace, and Twitter; gaming sites and virtual worlds such as Club Penguin, Second Life, and the Sims; video sites such as YouTube; and blogs (O'Keeffe & Clarke-Pearson, 2011).

Due to the varying definitions and the evolving range of stand-alone and built-in social networking services in the online space, Obar & William (2015) came up with four features which they proposed could suffice to for social networking services.

These include:

1. Those with Internet-based applications which can be downloaded on a smart device such as Android or iPhones.

2. Those with user-generated content (UGC) which allows users to create content — photos, video, text, etc. Businesses take advantage of this as when consumers post about a brand on social media, they influence their followers' buying decisions.
3. Users create service-specific profiles for the site or app that are designed and maintained by the SNS companies such as Facebook or WhatsApp that allow users to sign up.
4. A tool that facilitates the development of online social networks by connecting a user's profile with those of other individuals or groups.

Following these suggested features, Qalati, et.al. (2020) posits that with the changing technologies, the number of social media platforms are also increasing, making business owners and their customers to switch and become dynamic in its use. This is also making it quite difficult to place a strict call to just one platform. For example, by engaging on Facebook, Twitter, Instagram, and WhatsApp (all social media) is a routine activity that research has shown benefits people by enhancing communication, social connection, and even technical skills (O'Keeffe & Clarke-Pearson, 2011) which are required to do business in the 21st Century.

According to Petersen (2019) many businesses now effectively use social media to promote their products to make it visible and connect with customers. Although in emerging areas, the cry of fake news has become commonplace and consumer confidence in even traditional media outlets has been significantly eroded. This is because false, misleading, or confusing online sales content can harm the reputation of an enterprise and dissuade people from even considering the purchase of a business' products or services (Petersen, 2019).

SNSs are now a global phenomenon. As at September 2013, 73% of online adults were using an SNS of some kind and 42% were using more than one. In 2019, three scholars: Ojei Harrison Onyijen, Olusesan Michael Awoleye and Titilayo Olubunmi Olaposi went out to test the effectiveness of social media platforms for product marketing in south western Nigeria. Although this was a firm-level analysis, the results revealed that customer loyalty could be gained through the social media platforms by making it imperative for business aspiring to grow their market share to leverage on the available social media tools (Onyijen, Awoleye, & Olaposi, 2019). In another study conducted in South Africa, Iwu, Elvis & Tengeh (2017) resolved that social media is a likely remedy given the variety of the various usable platforms and their capacity for wider customer reach (Iwu, Elvis, & Tengeh, 2017). Kateri (2021) in an empirical study conducted on impact of social media adoption on performance of SMES in Kano State, Nigeria concluded that there was a strong statistical relationship between social media adoption and SMEs performance.

As at the time of this study, Facebook was the most popular platform (with more than 3.1 billion active users), Twitter, which in the previous year had 69.3 million active users, rose to 388 million users worldwide. Based on another report by internet live stats, Nigeria recorded a total of 86,219,965 internet users in 2016. This has moved up to over 109 million internet users - the highest number reported all over Africa as of January 2022 (Statista, 2022).

In parallel to general-purpose SNSs like Facebook and Twitter, online media has provided for businesses specific platforms where users can open Facebook Business or Instagram for Business accounts or WhatsApp Business where they can use marketing tools to run paid adverts to boost their visibility and increase their sales while still maintaining private social accounts for family and friends. The emerging trends are also making today's technologically savvy customers move to other convenient solutions to

satisfy their daily needs hence SNS have opened the space to accommodate and target people wanting to access a particular product or service through the same sites.

Ecommerce Growth in Nigeria

E-commerce platforms like Jumia, Konga, Jiji and Fintech companies have brought new dynamics to everyday micro business, as many have been reported to increasingly turn to the internet for a variety of transactions. E-commerce is the use of the internet for marketing, identification, payment and delivery of goods and services. The internet has revolutionized the mode of business transactions by allowing customers to bank, invest, purchase, distribute, interact, explore, and study from nearly anywhere, and any time there is internet connectivity; thanks to E-commerce technologies. E-commerce is one of the many mobile commerce (M-commerce) developments that, to a considerable part, make paying for products and services not only convenient but also flexible for the present day more digitally savvy customer (Osakwe & Okeke, 2016).

Like every online activity, E-commerce activities require internet connectivity for users to access the platforms. According to Statista (2022), Digital Markets E-commerce highlights that revenue in the E-commerce market is projected to reach US$8.52bn in 2022 with a projected market volume of US$12.58bn by 2025. In the E-commerce market, the number of users is expected to amount to 122.5m users by 2025.

User penetration for E-commerce is projected to reach 41.9% in 2022 and further expected to hit 52.5% by 2025. Businesses have also benefited from the internet in respect of the ability to purchase data in any amount. For example, in 2020, the telecoms operator, Airtel, came up with a service designed to enable business enterprises to purchase large data minimum of 1 terabyte. Through this offer, most enterprises can continue to stay online to interact with their customers. During the Covid-19 pandemic in 2020, the telecoms operator Globacom came up with a service plan - *GLOBACOM Work From Home Extra Data Plan.* The plan was a data plan designed for subscribers who were working from home due to the lockdown.

According to (Lancaster, 2019) an analyst, Nigeria is supported by the expansion of national fibre backbone networks, platforms such as E-commerce, online banking and e-payments, e-health, e-learning, and e-government are evolving rapidly. The government had earlier updated its broadband ambitions with the aim to increase penetration from 30% by 2020 to 70% by 2021.

Mobile Phones Penetration in Nigeria

The launch of GSM in 2001 liberated Nigerians from the shackles of the once powerful, but now virtually insignificant, national telecoms monopoly NITEL This was because, the Nigerian telecommunications received a great boost with the coming of the Global System for Communication (GSM) that year (Olaoluwa, 2019). Subsequently in 2003, the Nigerian Communications Commission (NCC) was set up and tasked with the facilitation of investments in and entry into the Nigerian market for provision and supply of communications services, equipment, and facilities.

As of December 2021, there were 195,128,265 active mobile lines in Nigeria.

Figure 3. Active mobile lines in Nigeria
Source: Nigerian Communications Commission 2021

OPERATORS	Jun'21	Sep'21	Dec'21
MTN Nigeria Communication	73,571,192	73,566,926	73,594,682
Globacom Limited	50,130,540	52,934,990	54,817,353
Airtel	50,665,723	51,035,565	53,926,886
EMTS Limited	12,908,092	12,983,433	12,789,344
Sub-Total (GSM)	187,275,547	190,520,914	195,128,265

The data from NCC also shows that 229,248 Voice over Internet Protocol (VoIP) Calls were made as at December 2021. This shows the Facebook calls, WhatsApp calls, Skype calls which basically means calls done via the internet.

According to IWS, the Internet usage statistics shows that Nigeria recorded 92,699,924 Internet users which is 51.1% of the population as at June 2015. According to Lancaster (2019), Nigeria's Internet sector has been hindered by the country's underdeveloped and unreliable fixed-line infrastructure, but this is changing as competition intensifies and new technologies are able to deliver wireless broadband access. Econet was the first telecommunication service to launch its services in Nigeria on August 8, 2001 and has since changed names over 3 times to what we now have as Airtel and going head-to-head with MTN which also began operations in August of the same year (Olaoluwa, 2019).

Through the mobile phones, M-Commerce has been made possible. M-commerce or Mobile Commerce refers to any transaction, involving buying and selling of goods and services, which is initiated and completed by using mobile access to computer-mediated networks with the help of an electronic device. This is a sub dimension of E-commerce.

Classification of Businesses in Nigeria

Micro, Small and medium-sized enterprises (MSMEs) play critical roles in the development and success of varied economies. According to the Macro-Economic Outlook 2022, businesses are the engine of growth of a nation including Nigeria. When properly supported, MSMEs will greatly contribute to the development of Nigeria's National Economic Outcomes. MSMEs are a genuine vehicle for attaining national economic objectives such as employment creation and poverty reduction at an incredibly low investment cost. Small-scale firms in Nigeria as posited by Ayozie & Latinwo (2011) have also helped to build entrepreneurial skills and growth of indigenous technologies.

According to a World Bank data estimate, SMEs account for around 90% of firms and more than 50% of jobs globally. As a result, they account for a fairly large proportion of the overall number of commercial establishments in the country. However, SMEs in Nigeria have not succeeded admirably, and so have not played the expected crucial and active role in Nigeria's economic growth and development. According to Agwu and Emeti (2014), one such confirmation is that start-ups in Nigeria are confronting a financial quagmire.

MSMEs globally are known for the strategic and impactful contributions they make as a stimulus for the industrialisation of national economies.

Small and Medium Scale Enterprises, as posited by Oni & Daniya (2012), constitute an essential ingredient in the lubrication and development of any economy because they dominate the economy. In discussing the factors constraining the growth and survival of SMEs in Nigeria, Okpara (2011) noted that one of such was insufficient profits and low demand for product and services. Ogbo & Nwachukwu (2012) further justifies it through the economic development perspective adding that these factors are thus making SMEs perform below expectation. Yet in looking at MSMEs productivity in Nigeria, these statements are negated by Ajuwon, Ikhide, & Akotey (2017) who discovered that small businesses actually recorded high productivity growth rate in some subsectors of the economy that specialises in product customisation such as garment and furniture.

It should be noted that the Nano Enterprises were also considered under this survey.

Nano and Micro Businesses in Bauchi State

The latest report by Small & Medium Enterprises Development Agency of Nigeria (SMEDAN) and the National Bureau of Statistics (2021) revealed that the total number of MSMEs as at December 2020 stood at 39,654,385 with components as follows, Micro Enterprises – MEs: 38,413,420 (or 96.9%), Small and Medium Enterprises – SMEs: 1,240,965 (or 3.1%). The highest number of enterprises across all the classes was evident in Lagos State Nigeria. This is in contrast with the joint survey on MSMEs which was carried out by SMEDA and NBS in 2017 which recorded over 41,000,000 MSMEs. Statistics show that the drop in number could be tied to so many factors including limited access to innovations, information, access to markets and the covid-19 pandemic (SMEDAN, 2021).

The latest category of Nano businesses are the various "solopreneurs" and home-based businesses such as make-up artists, event planners, battery chargers, independent dispatch riders, vendors, P.O.S agents, call centre agents, fashion designer, vulcanizers, drycleaners, corner shop owners, single retail marketers, repairers, painters, business centre operators, market women and men in the various open markets, among others. Before now, they played an unrecognised but important role across the country. With the recent categorization by SMEDAN they have become the least by classification. With the new data, they are no longer unaccounted as they have also been recognised to constitute a large portion of Nigeria's economy according to investigations.

Report by Engidaw (2022) showed that COVID-19 disruptions did not affect all businesses equally as some were deemed essential and remained open, while others were required to close. Through online media some businesses could shift employees to remote work, while others were ill-equipped for the transition.

METHODOLOGY

This study adopted a survey research technique. The survey approach appears best suited for this work as a pilot study since it is not feasible to interview the entire population of Bauchi State. Furthermore, because there are there are fixed sets of questions, in surveys, the responses can be systematically classified, so that quantitative comparisons can be made.

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Relying on the Nigeria Bureau of Statistics (NBC) data shows that the total number of enterprises in Nigeria was estimated at 38,413,420 spread out across the country. Data shows that, Bauchi State had a total of 34,685 NMSMEs with Nano: 6,648, Micro: 12,718 of the total number.

Using a digital sample size calculator with a 95% confidence level and a 4% margin of error, a total of 601were needed across the six-geopolitical zones of the country. To work for the north east, the sample size was divided across 6 with 100 purposively selected from the Bauchi State capital. For a fair representation of all forms of enterprise, the sources of primary data were the structured questionnaire which was administered to 36 identified NMEs drawn from the 365 categories of businesses provided by the Corporate Affairs Commission which is in charge of registering businesses in Nigeria.

Below are the 36 identified categories:

1. Abattoir and meat selling services
2. Bakery services
3. Beauty and salon services
4. Block industry
5. Boutique services
6. Car wash services
7. Carpentry/upholstery services
8. Catering services
9. Chemist /nursing home
10. Creative, art and entertainment activities
11. Deal in soft drinks
12. Dry cleaning and laundry services and industrial cleaning services or training
13. Education
14. Fashion Designing/tailoring services
15. Fishing and aquaculture
16. Gymnasium services
17. Laundry and dry-cleaning service
18. Livestock feeds production and distribution
19. Makeup and makeover services
20. Milling and grinding services
21. Operate fast food outlet
22. Photography services
23. Poultry services
24. Printing and reproduction of recorded media
25. Printing press
26. Sale of agricultural produce
27. Sale of agricultural tools, machine, and allied products
28. Sale of animals
29. Sale of automobile spare parts
30. Sale of computer, laptops, printers, photocopies, and their accessories
31. Sale of dairy products
32. Sale of groceries
33. Sale of mobile phones and accessories

34. Sale of motor vehicle, motorcycles, and other automobile products
35. Sale of sim cards credit/recharge cards
36. Trading

Thus, the SME owners/managers/sales representatives were approached to fill the questionnaire. Literature review provided the secondary data gathered from earlier research work to justify or negate findings.

Data Analysis and Presentation

A total of 100 NME owners participated in the survey. Data shows that of the enterprises surveyed, 67% were owned and supervised by men and 33% were businesses owned and managed by women.

Majority of the businesses were run by those within the age range of 26 – 35 years (49%) followed by those between 36-45 years of age at 33%. 18.4% of the respondents were between the ages of 18 – 25 years.

The entrepreneurs were disaggregated by the level of their educational qualification with majority at 45% being undergraduates. 41% had completed a secondary level education. Out of those surveyed, only 2% of business owners had no form of education.

One of the major disaggregation was by Length of Years of Business. Data shows that majority of the enterprises surveyed had been in business between 4 – 6 years with a 40% response. An average of 30% of the respondents had been in business between 1 -3 years and above 7 years.

57% of the business operating hours were between 9-12 hours while 36% were open between 5 – 8 hours daily. Only 7% were available for 24 hours.

1. Disaggregation by Business Category

Table 2. Source field data

| S/N	Category	Frequency
1	Trading	13
2	Sale of groceries	12
3	Beauty and salon services	11
4	Fashion Designing/tailoring services	7
5	Boutique services	6
6	Chemist /nursing home	6
7	Creative, art and entertainment activities	5
8	Abattoir and meat selling services	4
9	Deal in soft drinks	4
10	Livestock feeds production and distribution	3
11	Bakery services	3
12	Photography services	3
13	Catering services	3
14	Sale of sim cards credit/recharge cards	3
15	Laundry and dry-cleaning service	3
16	Sale of agricultural produce	2
17	Makeup and makeover services	2
18	Milling and grinding services	2
19	Operate fast food outlet	2
20	Block industry	1
21	Sale of computer, laptops, printers, photocopies, and their accessories	1
22	Dry cleaning and laundry services and industrial cleaning services or training	1
23	Carpentry/upholstery services	1
24	Printing and reproduction of recorded media	1
25	Fishing and aquaculture	1
	Grand Total	100

The pivot table above describes the category of businesses surveyed with trading 13(13%), sale of groceries 12 (12%), beauty and salon services 11 (11%), fashion designing/tailoring services 7 (7%), chemist /nursing home 6 (6%), boutique services and creative, art and entertainment activities at 5 (5%). The least was a mode of 1 (1%) for the block industry, sale of computer, laptops, printers, photocopies, and their accessories, printing and reproduction of recorded media, dry cleaning and laundry services and industrial cleaning services or training, carpentry/upholstery services and fishing and aquaculture.

2. Number of Staff Employed

Figure 4. Source field data
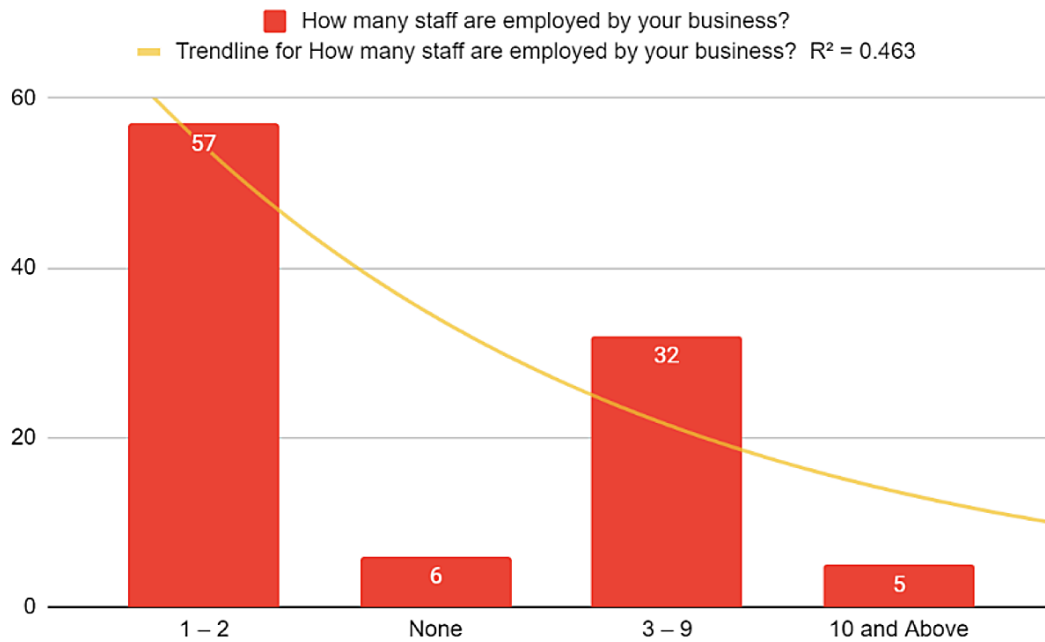
The combo chart above shows that majority of the businesses at 57% response rate had at least one staff employed. This shows that the Nano and Micro Enterprise category are available within the data provided with 57 and 32 respectively. The trendline for the number of staff employed is peaked at $R^2 = 0.463$.

3. Online Media Awareness

Figure 5. Source field data
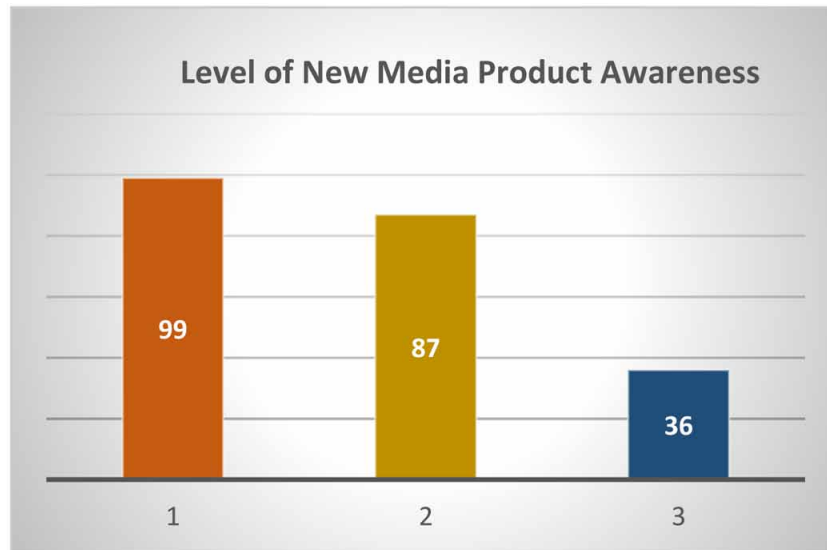
The bar chart above shows that a total of 99 businesses were aware of mobile smart phones while 87% of the sample size said they were aware of social media networks. Only 36% of the respondents admitted that they were aware of E-commerce sites.

4. How Often Do You Use Social Media Personally?

Figure 6. Source field data
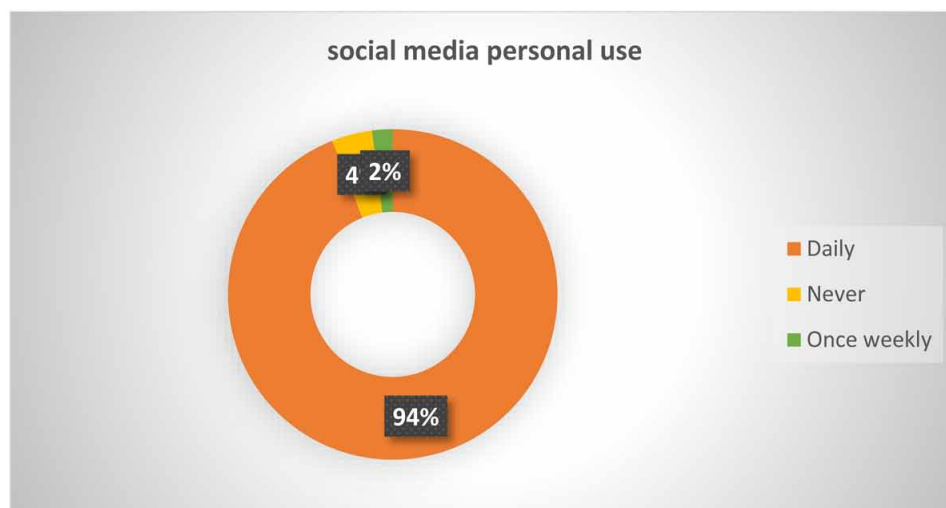
The pie chart above shows that 94% used social media daily.

5. Hypotheses Testing

Hypotheses 1, 2, 3 & 4 were tested using the Chi square (X^2) statistics to examine the relationships between the categorical variables and the independent variable; specifically, the relationship between the use of new media products by micro businesses in Bauchi State and increase in sales volume, visibility, and profitability. Hypothesis 4 was tested using an X^2 to measure the usage of new media products by NME owners for their businesses.

Hypothesis 1

H_0. The use of new media products by NMEs in Bauchi State does not have a significant relationship on their sales volume.

H_1: The use of new media products by NMEs in Bauchi State has a significant relationship on their sales volume.

The hypothesis is tested at 5% level of significance. The decision rule is to reject the null hypothesis if the *p*-value associated with the test statistics is less than 0.05 (5%) level of significance. The result of the hypothesis is presented in the contingency table below.

Contained is the following information:

The observed cell totals, (the expected cell totals) and [the chi-square statistic for each cell].

New Media Products Usage and Sales Volume

Table 3. Source field data

MSP SM	0	1	Marginal Row Totals
Tech in use	1 (1.76) [0.33]	2 (1.24) [0.47]	3
Significant increase	56 (55.24) [0.01]	38 (38.76) [0.02]	94
Marginal Column Totals	57	40	97 (Grand Total)

$X^2 = 0.8261$

P = .363392.

Decision: From the chi-test, the p-value is greater than 0.05 hence we accept the null hypothesis that the use of new media products by micro businesses in Bauchi State has no significant relationship on their sales volume.

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Hypothesis 2

H_0: There is no significant relationship between new media products and business visibility of micro businesses in Bauchi State.

H_1: There is a significant relationship between new media products and business visibility of micro businesses in Bauchi State.

The contingency table below provides the following information: the observed cell totals, (the expected cell totals) and [the chi-square statistic for each cell].

The chi-square statistic, p-value and statement of significance appear beneath the table 4.

Table 4. Source field data

Dependent Variables	Yes	No	Marginal Row Totals
Visibility	11 (13.50) [0.46]	89 (86.50) [0.07]	100
Profitability	16 (13.50) [0.46]	84 (86.50) [0.07]	100
Marginal Column Totals	27	173	**200 (Grand Total)**

$X^2 = 1.0704$

$p = .300847$

Decision: From the chi-test, the p-value is greater than 0.05 at .300847 hence we accept the null hypothesis that the use of new media products by micro businesses in Bauchi State has no significant relationship on their visibility and profitability. This is because the proportion of respondents who reported they did not use new media tools for visibility (N=89) differed significantly from those who reported they used it to advertise their business.

Hypothesis 4

H_0: NME owners in Bauchi do not use new media products for their businesses.
H_1: NME owners in Bauchi use new media products for their businesses.

The contingency table below provides the following information: the observed cell totals, (the expected cell totals) and [the chi-square statistic for each cell].

The chi-square statistic, p-value and statement of significance appear beneath the table 5.

Table 5. Source field data

Variable	Yes	No	Row Totals
phone for business	10 (8.00) [0.50]	90 (92.00) [0.04]	100
online media for business	6 (8.00) [0.50]	94 (92.00) [0.04]	100
Column Totals	16	184	**200 (Grand Total)**

$X^2 = 1.087$

$p = .297147$

Decision: From the chi-test, the p-value is greater than 0.05 at .297147 which is not significant at p < .05hence we accept the null hypothesis that NME owners in Bauchi do not use new media products for their businesses. This is because the proportion of respondents who reported they did not use their phone and online media for business (N= 90 & N = 94) differed significantly from those who reported they used it their business.

Hypothesis 5

H_0: NME owners in Bauchi do not know how to use new media products for their businesses.
H_1: NME owners in Bauchi know how to use new media products for their businesses.

To examine this hypothesis, a descriptive statistic was used to analyse the items on NME owners' knowledge of how to use new media products for their businesses. The results obtained were presented via median and standard deviation. The recurring mode was used to justify the results. Hence, any item with median score 2 and above was acceptable as a knowledgeable use for business as presented in the table 6.

Table 6. Source SPSS field data

|		Mobile Phone Scale	Telegram Scale	Likee Scale	IG Scale	LinkedIn Scale	Pinterest Scale	YouTube Scale	Tiktok Scale	FB Scale	Twitter Scale	WhatsApp Scale	E-comm Scale	Snapchat Scale
N	Valid	100	100	100	100	100	100	100	100	100	100	100	100	100
	Missing	0	0	0	0	0	0	0	0	0	0	0	0	0
Median		5.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	1.00	5.00	1.00	1.00
Std. Deviation		1.167	1.060	.716	1.258	.830	.836	1.131	1.304	1.817	1.262	1.739	.937	1.226

Mean = 1.69
Mode = 1

On a scale of 1 – 5, the contingency table above shows an average 1.69 as those knowledgeable on how to use new media products for their businesses. The mode of 1 proves that nano and micro business owners were not knowledgeable about new media products for their businesses.

Decision: Since the average of the hypothesis is less than half, we accept H_0 and conclude that nano and micro business owners in Bauchi do not know how to use new media products for their businesses. Based on the accepted H5 results, the pie chart below justifies the results which shows that 34 businesses (33.32%) were not using online media for business because 50% of them were not aware of any marketing strategies, 15% said they were aware of these platforms but did know how to use them for business. 12% affirmed that they had no interest in using social media for their business. Another 12% said they lacked access to facilities such as a smart phone. Another group of 12% reported that they were not aware of what the various online platforms could offer.

Figure 7. Source field data
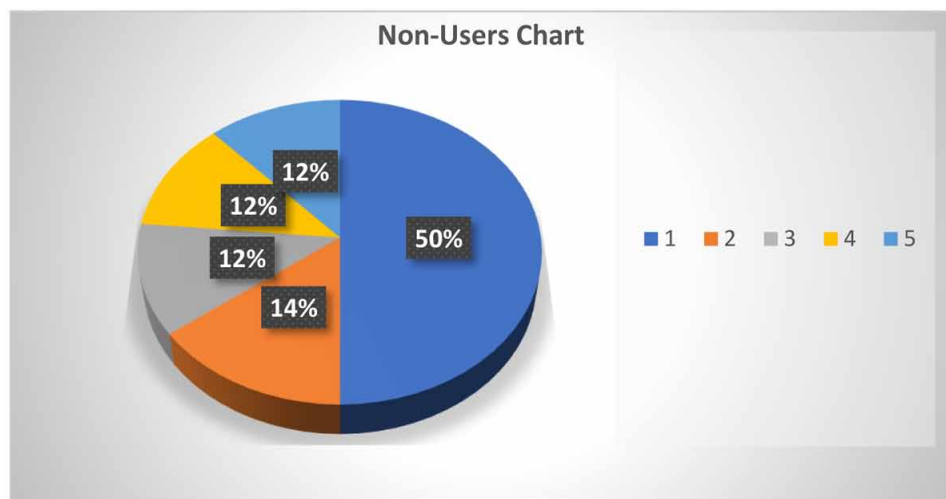
Business Interruptions During Covid-19 Lockdown

To ascertain if there was any effect of the lockdown on NMEs in Bauchi, an additional question was added around business interruptions as shown in the pie chart below

Figure 8. Source field data
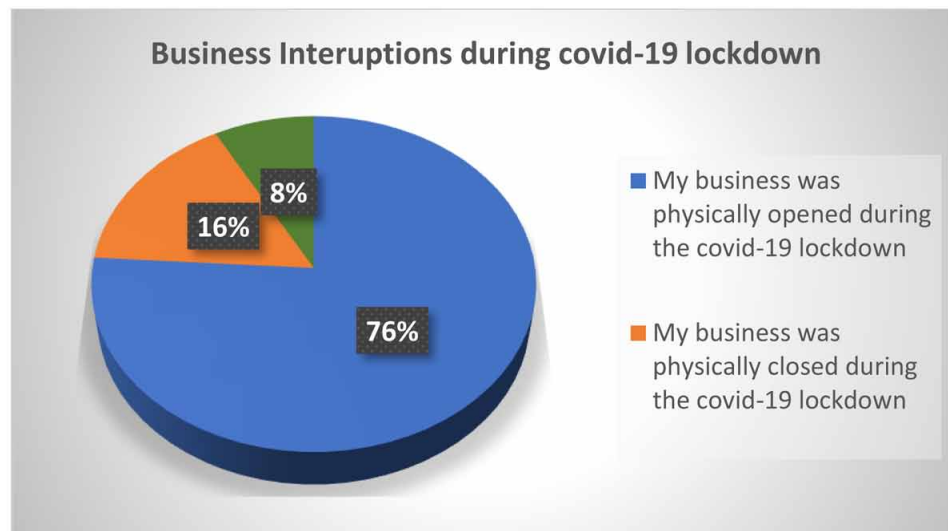
The pie chart above shows that 76% of businesses were open during the lockdown. Only 8% served their customers through an online medium. A total of 16% of businesses were physically closed.

Discussion of Findings

This study sought to assess the effect of new media products on Nano and Micro Enterprises (NMEs) in Bauchi State tested across 5 hypotheses. The following findings are discussed based on hypothesis 1 – 5 examined.

It can be deduced from the results provided during the analysis that the use of new media products by NME owners in Bauchi State has no significant relationship on their sales volume, visibility, and profitability. Although a majority of the sample size were aware of the new media products such as mobile smart phones, social media networks (e.g., Facebook, WhatsApp, Twitter) and E-Commerce the study revealed that it had not significantly translated to usage for business as only 38% reported that they used their smart phone for business. A key finding is that of all the new media products, smart phones, Facebook, and WhatsApp ranked the highest in knowledge and usage by NME owners. This negates the findings of Qalati, et.al. (2020) because the increasing social media platforms were not making NMEs adopt them easily. Some reported that they were distracting.

Worthy of note is that 94% of NMEs did claim that they used new media products especially social media on a daily basis, but these technologies for over 50% of them were for personal and not business purposes. This further justifies that awareness of the tools had not significantly translated to a business tool. Reasons provided for non-usage of new media products for business included: lack of awareness of what the tools could offer, others claimed their smart phone was distracting. Others were pegged on lack of knowledge of marketing strategies offered by new media products. These findings further led to the decision to accept the null hypothesis and conclude that NMEs in Bauchi do not use new media products for their businesses and do not know how to use new media products for their businesses.

Some none-users pegged their reasons along the lack of access to internet and their inability to afford a smart phone or the opportunity to go online. This justifies the theory of digital divide that that there is an economic and social gap between the population of a nation and their access to technologies and technical know-how. This explains why the Technology Acceptance Model also emphasises on the need to consider several factors which include perceived usefulness and affordability that would ensure a user gets the best from a tool.

Now, although only 8% of the respondents reported that they were able to serve their customers online during the lockdown, what is prominent in the data is their educational qualifications which were on the ratio of 50:50 of undergraduates and master's degree holders. Evidence shows that these categories of NME owners were also aware of all 3 new media product categories (mobile phones, social media, and E-commerce). Yet, the study significantly revealed that 98% of respondents doing business had at least a minimum of a primary education. Although 45% of those reported were undergraduates, this additional data did not translate wholly to their awareness of all the new media products listed as only 18% were fully aware which implies that only 2 in every ten undergraduates doing business are aware of all the new media products available for their business.

From the research hypothesis 5, the result obtained showed that all selections by respondents were on a mean of 1 therefore, it can be inferred that the lack of knowledge of the business benefits of new media products by NME owners restricts their use of the products as well. While the use of online technologies has been reported to have revolutionised the way individuals communicate with one another and do business, this study revealed that majority of NMEs in Bauchi performed their businesses oblivious of what new media products could offer.

CONCLUSION

This research took a step towards evaluating the relationship between new media adoption, and business performance of NMEs in Bauchi State. The study also tested the positions of Appel, Grewal, Hadi, et al. (2020); Eze, Chinedu-Eze, Okike & Bello, (2020) along the areas of how social media affects product promotion and visibility. As such, the results discussed here have significant implications in the area of academic learning and business studies. Firstly, this research provides empirical evidence that NMEs in Bauchi though aware of the new media products and tools do not use them to boost their businesses. While empirical tests on NMEs have been tested in filters across Nigeria, (Ndife, 2020; *Daramola, Okolie & Iyiebuniwe. 2021)* these findings are still an imperative task for academics and practitioners, because of the seemingly new evidence which has emerged from a part of the country which had been captured in the theoretical framework as a digital divide. Such theoretical constructs, therefore, make this study a rider for others on the need for an inclusive study that will explore the divide established in this examination. Second, the research contributes to literature by advancing the viewpoint that technological awareness does not translate to usage of product for business. This finding is significant for academics and practitioners alike. Practitioners should take into account that the dependent variables considered for all the constructs in this study were still happening irrespective of new media awareness. While the idea that new media use affects business performance has been the applause received so far, it is important to mention that the manner businesses stayed opened during the 2020 Covid-19 pandemic lockdown in Bauchi State indicates that some regions in Nigeria were not affected by the global effects as reported on the news. This encourages a return to the field to understand this region's dynamics. The

researcher believes this study has improved past findings by offering new and useful insights into how businesses could thrive better by improving their knowledge and adoption of innovation of available new media products to achieve a competitive advantage. With so many new media platforms, social media research has recently drawn a lot of interest from academics, stakeholders and governments to practical applications and requires further discussions due to its dynamic nature.

RECOMMENDATIONS

The findings of this study have some recommendations for further analysis:

1 - This study focused on the NMEs in Bauchi State, Nigeria. The findings of the analysis require further research that might triangulate this data for a comparative study across the other geo-political regions of Nigeria. This will provide a basis for generalizability.

2 - There is a need for government bodies and social media platform owners to communicate the benefits of new media tools particularly social media and E-commerce to those businesses that have yet to adopt its usage for their businesses.

3 – Continuous training on the dynamic nature of change new media tools.

4 – NMEs which belong to various associations should, as part of their meetings, involve new media experts that would train and expose them to methods through which they can derive more benefits from their businesses.

5 – To bridge the digital divide, government can subsidize internet and phone costs so the economically disadvantaged can afford it.

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